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## Sorosporium Ellisii Winter, a composite species

H. S. JACKSON

In October, 1907, the writer collected a *Sorosporium* on *Aristida dichotoma* in the vicinity of Newark, Delaware, and found on examination that it agreed with specimens on the same host referred to *Sorosporium Ellisii* Winter. An examination of the specimens in Ellis & Ev. N. A. Fungi, led me to believe that *Sorosporium Ellisii* as described by Winter was a composite species.

Winter based his *Sorosporium Ellisii* on two collections sent him by Mr. J. B. Ellis. One of these collections was made by Mr. Ellis on *Andropogon virginicus* at Newfield, N. J., Oct., 1880; the other on *Aristida dichotoma* by Mr. Wm. Trimble in Chester Co., Pa., Sept., 1880, and communicated to Mr. Ellis by Dr. Martin. Recently I had the opportunity of examining material in the Ellis and other collections in the herbarium of the New York Botanical Garden, and became convinced that the form on *Andropogon* is specifically distinct from the one on *Aristida*.

In separating these two forms into species, the question arises as to which shall be quoted as the type of *Sorosporium Ellisii*. The original description appeared simultaneously in Hedwigia 22 : 2. Ja 1883, and in Bull. Torrey Club 10 : 7. Ja 1883. In Hedwigia, *Aristida* is the first host mentioned, while in the Bulletin of the Torrey Botanical Club, *Andropogon* is mentioned first. It is seen that as far as the original description is concerned neither specimen can be said to have priority. As to the date of collection, the form on *Aristida* was collected in September, 1880, while that on *Andropogon* was taken in October, 1880, as is shown by the data on the envelopes in the Ellis collection. This fact might lead some mycologists to give precedence to the form on *Aristida*. However, Winter named his fungus in honor of Ellis, and it seems proper to consider the specimen collected by Ellis as the type.

*Sorosporium Ellisii* Winter, therefore, should refer to the form on *Andropogon*, which has the following distribution :\*

On Poaceae :

*Andropogon virginicus* L. New Jersey.

*Andropogon scoparius* Michx. Connecticut, Illinois, Kansas.

TYPE LOCALITY : Newfield, N. J., on *Andropogon virginicus* L.

EXSICCATI : Seym. & Earle, Econ. Fungi C 38 ; Ellis & Ev. N. A. Fungi 1099.

The two specimens of the original collections on *Andropogon* and *Aristida* are marked (probably by Ellis) *Sorosporium Ellisii* Winter f. *Andropogonis* and f. *Aristidae* respectively. The name *Sorosporium Aristidae* is, however, untenable.† The following name with description is proposed for the form on *Aristida*.

***Sorosporium confusum* sp. nov.**

Sori in the ovaries, enclosed by the enveloping glumes, elongated, tapering above, 3 mm. in length, provided with an inconspicuous membrane which ruptures irregularly : spore-balls irregular, subglobose or elongated, 30–100  $\mu$  in length, at first firm, but easily separating into spores : spores subspherical or polyhedral, frequently flattened and so appearing elongated or subcircular in section, according to view, mostly 12–14  $\mu$ , occasionally only 10  $\mu$  and reaching 15.5  $\mu$  in length ; wall verruculose.

On Poaceae :

*Aristida dichotoma* Michx. Pennsylvania, Trimble ; Ohio ; Delaware, Jackson.

*Aristida purpurascens* Poir. (?) Alabama, Underwood.

TYPE LOCALITY : Newark, Delaware, on *Aristida dichotoma*.

DISTRIBUTION : Delaware to Ohio and Alabama.

EXSICCATI : Ellis & Ev. N. Am. Fungi 1494.

The two species are easily separated by the character of the sorus. In *S. Ellisii* the whole inflorescence is affected, in *S. confusum* only the ovaries. The spores in the latter are somewhat smaller than in the former.

The Delaware specimen is selected as the type because it is the best material we have seen. The specimens in Ellis & Ev. N. A. Fungi 1494 are mostly barren. This fact, together with

\* Taken from Clinton, N. A. Flora 7 : 39. 1906.

† See Saccardo, Sylloge Fungorum 13 : 123 ; *Sorosporium Aristidae* Neg. (unpublished ?).

the small number of collections made, probably accounts for this species having been so long overlooked. The type specimen has been deposited in the herbarium of the New York Botanical Garden. The Alabama material differs from the type in its slightly darker spores. The Ohio material has not been seen, but is here included on the authority of Clinton (*l. c.*).

The writer here acknowledges the kindness of the officials of the New York Botanical Garden in giving him unrestricted use of their library and herbarium.

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